

WHAT IS CLAIMED IS:

1. An interface for connecting an analog audiovisual signal source with a digital data network, said interface comprising:
 - at least one paired analog audio signal input and analog video signal input;
 - a video decoder connected to said video signal input for decoding and digitizing an incoming video signal;
 - an analog-to-digital converter connected to said audio signal input for digitizing an incoming audio signal;
 - a compressor for receiving output from said video decoder and said analog-to-digital converter and combining and compressing said digitized video signal and said digitized audio signal into a single audiovisual data stream; and
 - a network interface for receiving output from said compressor and transmitting said audiovisual data stream on said digital data network.
2. A digital data distribution system comprising the interface of claim 1, wherein said digital data network is a fiber-optic network, and said network interface converts said audiovisual data stream into an optical data stream before transmitting said optical data stream on said digital data network.
3. The system of claim 2, wherein said digital data network is installed in a vehicle.
4. The interface of claim 1, wherein said compressor uses an MPEG compression.
5. The interface of claim 1, further comprising:

a second paired analog audio signal input and analog video signal input;
a second video decoder connected to said second video signal input for decoding
and digitizing a second video signal;
a second analog-to-digital converter connected to said second audio signal input
for digitizing a second audio signal; and
a second compressor for receiving output from said second video decoder and said
second analog-to-digital converter and combining and compressing said digitized second
video signal and said digitized second audio signal into a second audiovisual data stream;
wherein said network interface receives output from said first and second
compressors, packetizes said first and second audiovisual data streams and transmits said
first and second audiovisual data streams on said digital data network.

6. The interface of claim 5, further comprising:

an S-video input paired with a third analog audio signal input;
a first multiplexer for receiving said first, second and S-video signals and
providing a selected video signal to said first video decoder; and
a second multiplexer for receiving said first, second and third audio signals and
providing a selected audio signal to said first analog-to-digital converter;
a third multiplexer for receiving said first, second and S-video signals and
providing a selected video signal to said second video decoder; and
a fourth multiplexer for receiving said first, second and third audio signals and
providing a selected audio signal to said second analog-to-digital converter.

7. A system for reproducing and transmitting audiovisual data from an optical
disc comprising:

an optical disc drive for reproducing audio or audiovisual data from an optical
disc, wherein said optical disc drive outputs an analog video signal;
a digital data network for transmitting digital audiovisual data streams; and

an interface for interfacing said output of said optical disc drive with said digital data network, said interface comprising:

 a video decoder connected to said output of said optical disc drive for receiving, decoding and digitizing said analog video signal;

 a compressor for receiving output from said video decoder and a digital audio signal from said optical disc drive, said compressor combining and compressing said digitized video signal and said audio signal into a single audiovisual data stream; and

 a network interface for receiving output from said compressor and transmitting said audiovisual data stream on said digital data network.

8. The system of claim 7, wherein said digital data network is a fiber-optic network, and said network interface converts said audiovisual data stream into an optical data stream before transmitting said optical data stream on said digital data network.

9. The system of claim 7, wherein said digital data network is installed in a vehicle.

10. The system of claim 7, wherein said compressor uses an MPEG compression.

11. The system of claim 7, further comprising a micro-controller for receiving user commands for said optical disc drive via said data network and controlling said optical disc drive in accordance with said user commands.

12. The system of claim 7, wherein said optical disc drive and said interface are enclosed in a common enclosure.

13. The system of claim 7, further comprising:
at least one paired analog audio signal input and analog video signal input;
a second video decoder connected to said video signal input for decoding and
digitizing a second incoming video signal;
an analog-to-digital converter connected to said audio signal input for digitizing a
second incoming audio signal; and
a second compressor for receiving output from said video decoder and said analog-
to-digital converter and combining and compressing said digitized second video signal
and said digitized second audio signal into a second audiovisual data stream;
wherein said network interface receives said second audiovisual data stream for
transmission on said digital data network; and
wherein said network interface packetizes said first and second audiovisual data
streams and transmits said first and second audiovisual data streams on said digital data
network.
14. The system of claim 13, wherein said second compressor uses an MPEG
compression.

15. A system for transmitting audiovisual data from a digital video camera
comprising:
an IEEE 1394 port for receiving an IEEE 1394 bus connected to a digital video
camera such that a digital audiovisual signal transmitted via said bus from said camera is
received through said port;
a digital data network for transmitting digital audiovisual data streams; and
an interface for interfacing said IEEE 1394 port with said digital data network,
said interface comprising:
a video decoder connected to said IEEE 1394 port for receiving and
decoding said digital audiovisual signal;

a compressor for receiving output from said video decoder, said compressor compressing said audiovisual signal to produce a compressed audiovisual data stream; and

a network interface for receiving output from said compressor and transmitting said audiovisual data stream on said digital data network.

16. The system of claim 15, wherein said digital data network is a fiber-optic network, and said network interface converts said audiovisual data stream into an optical data stream before transmitting said optical data stream on said digital data network.

17. The system of claim 15, wherein said digital data network is installed in a vehicle.

18. The system of claim 15, wherein said compressor uses an MPEG compressing standard.

19. The system of claim 15, further comprising a micro-controller for receiving user commands for said digital video camera via said data network and controlling said digital video camera in accordance with said user commands.

20. The system of claim 15, further comprising:
at least one paired analog audio signal input and analog video signal input;
a second video decoder connected to said video signal input for decoding and digitizing a second incoming video signal;
an analog-to-digital converter connected to said audio signal input for digitizing a second incoming audio signal; and

a second compressor for receiving output from said second video decoder and said analog-to-digital converter and compressing and combining said digitized second video signal and said digitized second audio signal into a second audiovisual data stream;

wherein said network interface receives said second audiovisual data stream for transmission on said digital data network; and

wherein said network interface packetizes said first and second audiovisual data streams and transmits said first and second audiovisual data streams on said digital data network.

21. The system of claim 20, wherein said second compressor uses an MPEG compression.

22. The system of claim 15, further comprising:

an optical disc drive for reproducing audio or audiovisual data from an optical disc, wherein said optical disc drive outputs an analog video signal; and
an interface for interfacing said output of said optical disc drive with said digital data network, said interface comprising:

a second video decoder connected to said output of said optical disc drive for receiving, decoding and digitizing said analog video signal; and

a second compressor for receiving output from said second video decoder and a digital audio signal from said optical disc drive, said second compressor compressing and combining said digitized video signal and said audio signal into a second audiovisual data stream; and

wherein said network interface receives said second audiovisual data stream for transmission on said digital data network; and

wherein said network interface packetizes said first and second audiovisual data streams and transmits said first and second audiovisual data streams on said digital data network.

23. The system of claim 22, further comprising:

at least one paired analog audio signal input and analog video signal input;

a third video decoder connected to said video signal input for decoding and digitizing a third incoming video signal;

an analog-to-digital converter connected to said audio signal input for digitizing a third incoming audio signal; and

a third compressor for receiving output from said third video decoder and said analog-to-digital converter and compressing and combining said digitized third video signal and said third audio signal into a third audiovisual data stream;

wherein said network interface receives said third audiovisual data stream for transmission on said digital data network; and

wherein said network interface packetizes said first, second and third audiovisual data streams and transmits said first, second and third audiovisual data streams on said digital data network.

24. A method of interfacing an analog audiovisual signal source with a digital data network, said method comprising:

decoding and digitizing an incoming analog video signal;

digitizing an incoming analog audio signal;

combining and compressing said digitized video signal and said digitized audio signal into a single audiovisual data stream; and

transmitting said audiovisual data stream on said digital data network.

25. The method of claim 24, wherein said digital data network is a fiber-optic network, said method further comprising converting said audiovisual data stream into an optical data stream before transmitting said optical data stream on said digital data network.

26. The method of claim 24, further comprising connecting at least one audiovisual output device to said data network for receiving and outputting said audiovisual data stream.

27. The method of claim 26, wherein said connecting of at least one audiovisual output device to said data network is performed in a vehicle in which said data network is installed.

28. The method of claim 24, wherein said compressing is performed according to an MPEG compression standard.

29. The method of claim 24, further comprising:
receiving a second paired analog audio signal and analog video signal;
decoding and digitizing said second video signal;
digitizing said second audio signal;
combining and compressing said digitized second video signal and said digitized second audio signal into a second audiovisual data stream;
packetizing said first and second audiovisual data streams; and
transmitting said first and second audiovisual data streams on said digital data network.

30. The method of claim 29, further comprising:
with a multiplexer, providing a selected incoming video signal to a first video decoder;
with a second multiplexer, providing a selected audio signal to a first analog-to-digital converter;

with a third multiplexer, providing a selected incoming video signal to a second video decoder; and

with a fourth multiplexer, providing a selected audio signal to a second analog-to-digital converter.

31. A method of reproducing and transmitting audiovisual data from an optical disc comprising:

reproducing audio or audiovisual data from an optical disc with an optical disc drive, wherein said optical disc drive outputs an analog video signal and a digital audio signal;

decoding and digitizing said analog video signal;

combining and compressing said decoded, digitized video signal and said digital audio signal to form a single audiovisual data stream; and

transmitting said audiovisual data stream on a digital data network.

32. The method of claim 31, further comprising converting said audiovisual data stream into an optical data stream before transmitting said optical data stream on said digital data network, wherein said digital data network is a fiber-optic network.

33. The method of claim 31, further comprising installing said digital data network in a vehicle.

34. The method of claim 31, wherein said compressing is performed according to an MPEG compression standard.

35. The method of claim 31, further comprising remotely controlling said optical disc drive by entering user commands which are transmitted to said optical disc drive via said network.

36. The method of claim 31, further comprising:
receiving an analog audio signal and an analog video signal from an analog signal source other than said optical disc drive;
decoding and digitizing said second incoming video signal;
digitizing said second incoming audio signal;
combining and compressing said digitized second video signal and said digitized second audio signal into a second audiovisual data stream;
packetizing said first and second audiovisual data streams; and
transmitting said first and second audiovisual data streams on said digital data network.

37. A method of transmitting audiovisual data from a digital video camera comprising:
connecting an IEEE 1394 bus between said digital video camera and an IEEE 1394 port of an interface unit such that a digital audiovisual signal transmitted via said bus from said camera is received through said port;
decoding said digital audiovisual signal; and
re-encoding said audiovisual signal at a lower bit rate to produce an encoded audiovisual data stream; and
transmitting said audiovisual data stream over a digital data network.

38. The method of claim 37, further comprising converting said audiovisual data stream into an optical data stream before transmitting said optical data stream on said digital data network; wherein said digital data network is a fiber-optic network.

39. The method of claim 37, further comprising installing said digital data network in a vehicle.

40. The method of claim 37, wherein said re-encoding is performed using an MPEG encoding standard.

41. The method of claim 37, further remotely controlling said video camera by transmitting user commands to said video camera via said digital data network.

42. A system for interfacing an analog audiovisual signal source with a digital data network, said system comprising:

means for decoding and digitizing an incoming analog video signal;

means for digitizing an incoming analog audio signal;

means for combining and compressing said digitized video signal and said digitized audio signal into a single audiovisual data stream; and

means for transmitting said audiovisual data stream on said digital data network.

43. The system of claim 42, wherein said network is a fiber-optic network.

44. The system of claim 42, wherein said network is installed in a vehicle.

45. A system for reproducing and transmitting audiovisual data from an optical disc comprising:

means for reproducing audio or audiovisual data from an optical disc to produce an analog video signal and a digital audio signal;

means for decoding and digitizing said analog video signal;

means for combining and compressing said decoded, digitized video signal and said digital audio signal to form a single audiovisual data stream; and

means for transmitting said audiovisual data stream on a digital data network.

46. The system of claim 45, wherein said network is a fiber-optic network.
47. The system of claim 45, wherein said network is installed in a vehicle.
48. A system for transmitting audiovisual data from a digital video camera comprising:
 - an IEEE 1394 bus for connection between said digital video camera and an IEEE 1394 port of an interface unit such that a digital audiovisual signal transmitted via said bus from said camera is received through said port;
 - means for decoding said digital audiovisual signal; and
 - means for re-encoding said audiovisual signal at a lower bit rate to produce an encoded audiovisual data stream; and
 - means for transmitting said audiovisual data stream over a digital data network.